

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 April 2002 (04.04.2002)

PCT

(10) International Publication Number
WO 02/28125 A2

- (51) International Patent Classification⁷: **H04Q 7/00**
- (21) International Application Number: PCT/US01/42108
- (22) International Filing Date:
10 September 2001 (10.09.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/677,550 29 September 2000 (29.09.2000) US
- (71) Applicant (*for all designated States except US*): **TELEFONAKTIEBOLAGET L.M. ERICSSON (Publ)**
[SE/SE]; S-164 80 Stockholm (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **DUNKO, Greg**
[US/US]; 103 Mixedwood Court, Cary, NC 27511 (US).
LOHR, Jonathan [US/US]; 5928 Swales Way, Raleigh,
NC 27606 (US).
- (74) Agent: **GLATZ, Robert, W.**; Myers Bigel Sibley Sajovec,
P.A., P.O. Box 37428, Raleigh, NC 27627 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— *without international search report and to be republished upon receipt of that report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR IDENTIFYING A COMPATIBLE INDIVIDUAL IN A GEOGRAPHIC AREA

(57) Abstract: Embodiments of the present invention include methods, systems and computer program products for identifying a compatible individual in a specified region. The identifying operations in various embodiments are performed by a server located remote from the specified region. A registration request is received at the server from a mobile device. The registration request includes a profile identifier associated with a user of the mobile device and further includes location information identifying a location in the specified region. A profile associated with the profile identifier is obtained by the server which also determines if a compatible individual is located within the specified region based on the profile and location information. The user of the mobile device is notified if a compatible individual is located. Other embodiments utilize location information generated automatically by the mobile device, for example, using a Global Positioning System (GPS) receiver or a land based automated positioning system. Further embodiments include a profile identifier which is unique to a profile, rather than an individual user, so that profile changes for an individual user may be identified by a change in the profile identifier associated with the individual user's profile information.

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METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR IDENTIFYING A COMPATIBLE INDIVIDUAL IN A GEOGRAPHIC AREA

BACKGROUND OF THE INVENTION

The present invention relates to locating compatible individuals for the purpose of meeting people and, more particularly, to locating compatible individuals in a particular geographic area.

The desire of individuals to learn about and contact other individuals with compatible interests has been addressed by a variety of types of introduction systems in the past. For example, a variety of newspapers and magazines include sections which typically list profiles which readers can scan in search of a person having matching interests. Hobby-oriented clubs, such as photography, hiking, etc., typically advertise meetings for the benefit of newcomers, visitors, and others who might be interested in the hobby clubs' associated activities. More recently, with the introduction of widespread communication networks, such as the Internet, computers have been utilized to accomplish this same objective of performing introductions. For example, America Online (AOL) operates a service that allows users to scan through a list of profiles for a given area. Services, such as AOL, typically also operate "chat rooms" which may have an associated theme and allow individuals to exchange electronic communications by entering into the chat room and participating in an ongoing discussion.

Various systems in the past have also provided for limited screening for compatibility. For example, matchmaker or date finder services, such as those that may be operated by radio stations, may provide limited screening for compatibility. A computer based system for locating compatible persons is described in United States Patent No. 5,086,394 which relies on local control units positioned in geographic locations, for example, in a restaurant, where the user of the system may enter identification and registration information. Users are further provided personal devices, such as a pager, which may maintain a copy of a user's personal data and may be assigned an address code that identifies the personal device and, thereby, the

assigned user of the personal device. A further example of an "on the spot" introduction system is provided in United States Patent No. 4,173,016.

SUMMARY OF THE INVENTION

5 Embodiments of the present invention include methods, systems and computer program products for identifying a compatible individual in a specified region. The identifying operations in various embodiments are performed by a server located remote from the specified region. A registration request is received at the server from a mobile device. The registration request includes a profile identifier associated with
10 a user of the mobile device and further includes location information identifying a location in the specified region. A profile associated with the profile identifier is obtained by the server which also determines if a compatible individual is located within the specified region based on the profile and location information. The user of the mobile device is notified if a compatible individual is located. Other
15 embodiments utilize location information generated automatically by the mobile device, for example, using a Global Positioning System (GPS) receiver or a land based automated positioning system. Further embodiments include a profile identifier which is unique to a profile, rather than an individual user, so that profile changes for an individual user may be identified by a change in the profile identifier associated
20 with the individual user's profile information.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram of embodiments of the present invention implemented in a network environment.

25 Figure 2 is a block diagram of data processing systems according to embodiments of the present invention.

Figure 3 is a more detailed block diagram of data processing systems according to embodiments of the present invention.

30 Figure 4 is a block diagram of a mobile device according to embodiments of the present invention.

Figure 5 is a flowchart illustrating operations for identifying a compatible individual using a remoter server according to embodiments of the present invention.

Figure 6 is a flowchart illustrating operations for identifying a compatible user as performed by a mobile device having automated location determination capabilities according to embodiments of the present invention.

5 Figure 7 is a flowchart illustrating operations for identifying a compatible individual using a search criteria according to embodiments of the present invention.

Figure 8 is a flowchart illustrating operations for establishing and updating a profile having an associated profile identifier according to embodiments of the present invention.

10 Figure 9 is a flowchart illustrating operations for identifying a compatible individual according to further embodiments of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention now will be described more fully hereinafter with reference to the accompanying drawings, in which illustrative embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art.

As will be appreciated by one of skill in the art, the present invention may be embodied as a method, system, or computer program product. Accordingly, the present invention may take the form of an entirely hardware embodiment, an entirely software embodiment or an embodiment combining software and hardware aspects. Furthermore, the present invention may take the form of a computer program product on a computer-usable storage medium having computer-usable program code means embodied in the medium. Any suitable computer readable medium may be utilized including hard disks, CD-ROMs, optical storage devices, a transmission media, such as those supporting the Internet or an intranet, or magnetic storage devices.

Computer program code for carrying out operations of the present invention may be written in an object oriented programming language such as Java®, Smalltalk or C++. However, the computer program code for carrying out operations of the present invention may also be written in conventional procedural programming languages, such as the "C" programming language. The program code may execute entirely on the user's computer, partly on the user's computer, as a stand-alone software package, partly on the user's computer and partly on a remote computer or

entirely on the remote computer. In the latter scenario, the remote computer may be connected to the user's computer through a local area network (LAN) or a wide area network (WAN), or the connection may be made to an external computer (for example, through the Internet using an Internet Service Provider).

5 The present invention is described below with reference to flowchart illustrations and/or block diagrams of methods, apparatus (systems) and computer program products according to embodiments of the invention. It will be understood that each block of the flowchart illustrations and/or block diagrams, and combinations of blocks in the flowchart illustrations and/or block diagrams, can be implemented by
10 computer program instructions. These computer program instructions may be provided to a processor of a general purpose computer, special purpose computer, or other programmable data processing apparatus to produce a machine, such that the instructions, which execute via the processor of the computer or other programmable data processing apparatus, create means for implementing the functions specified in
15 the flowchart and/or block diagram block or blocks.

These computer program instructions may also be stored in a computer-readable memory that can direct a computer or other programmable data processing apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture including instruction
20 means which implement the function specified in the flowchart and/or block diagram block or blocks.

The computer program instructions may also be loaded onto a computer or other programmable data processing apparatus to cause a series of operational steps to be performed on the computer or other programmable apparatus to produce a
25 computer implemented process such that the instructions which execute on the computer or other programmable apparatus provide steps for implementing the functions specified in the flowchart and/or block diagram block or blocks.

Figure 1 is a block diagram which illustrates embodiments of the present invention implemented in a computer network environment. The system 100 includes
30 a gateway server 105 which is operatively coupled to a profile database 110. For the illustrated embodiments of Figure 1, the server 105 is coupled to a wireless network 120, such as a cellular telecommunications network, through a communication network such as the Internet protocol (IP) network 125 shown in Figure 1. A wireless terminal 130 communicates over a wireless connection to the wireless

network 120. Thus, the wireless network 120 may provide a connection between the wireless terminal 130 and the server 105 through the IP network 125. The wireless terminal 130 further communicates with a locating system, illustrated as a GPS satellite 135 for the embodiments shown in Figure 1.

5 The gateway server 105 may be used to allow individuals, such as a user of the wireless terminal 130, to find potential mates, friends, colleagues or other individuals with compatible interests either when they come into a new physical location, such as traveling to a new city, or in their home area. The gateway server 105 utilizes profile information on different users from the profile database 110 to make comparisons to
10 identification of a possible match of individuals in a designated geographical location. Location information received from the wireless terminal 130, such as a position fix generated by the wireless terminal 130 using a GPS system including the GPS satellite 135 may be provided by the wireless terminal 130 to the gateway server 105. The gateway server 105, which, in turn, may use the location information as a
15 comparison parameter defining the specified region for which a match is sought. In various embodiments, the gateway server 105 may further initiate a follow up contact, including an anonymous contact between matched individuals. The gateway server 105 need not be located in any of the geographic locations where various users of wireless terminals 130 are located in order to perform its locating operations.
20 Location information may be provided by the wireless terminal 130 to the gateway server 105, for example, over the IP network 125, thus allowing the gateway server 105 to be positioned at any convenient location.

 In embodiments of the present invention, methods, systems and computer program products are provided for identifying a compatible individual in a specified
25 region using a server located remote from the specified region. A registration request is received at the server from a mobile device. The registration request includes a profile identifier associated with a user of the mobile device and further includes location information for the mobile device. The location information identifies a location in the specified region. A profile associated with the profile identifier is
30 obtained. It is determined if a compatible individual is located within the specified region based on the profile and the location information. The user associated with the mobile device is notified if a compatible individual is located.

 In further embodiments of the present invention, the server further initiates contact between the user of the mobile device and the compatible individual. The

compatible individual may be a user of a second mobile device and contact may be initiated by establishing an anonymous connection between the mobile device and the second mobile device. The contact in various embodiments may be initiated by: establishing an instant messaging (IM) session using anonymous identities;

5 exchanging SMS messages between the mobile device and a second mobile device associated with the compatible individual with personal identification information removed; or, providing anonymous message posting for the user of the mobile device and the compatible individual. In alternative embodiments the contact may be initiated by providing the user of the mobile terminal and the compatible individual

10 contact information.

In other embodiments of the present invention, initiating contact includes scheduling a contact time for the user of the mobile device and the compatible individual based on information obtained from: the profile; a profile associated with the compatible individual; schedule information received from the mobile device in

15 the registration request; schedule information received from a schedule database; or, schedule information received from the mobile device responsive to the notification of a compatible individual.

In yet further embodiments of the present invention, the registration request includes search criteria. Determining if a compatible individual is located within the

20 specified region may further include searching a database containing profiles for a plurality of candidate individuals for a match with the profile associated with the profile identifier based on the search criteria. The profiles for the candidate individuals may include a designation of either a local individual for the specified region or a roamer individual for the specified region. The search criteria may

25 include a designation of either a local or roamer individual and the search may be for profiles containing the designated type of local or roamer individual for the specified region.

In further embodiments of the present invention, the search criteria includes a designation of duration of stay. The profile associated with the profile identifier is

30 placed in the search database for the duration of stay. The search database is periodically searched for a compatible individual for the duration of stay. The search criteria may further include a designation of search timing and the search database may be periodically searched for a compatible individual for the duration of stay at times based on the designation of search timing. In other embodiments, the search

criteria includes itinerary information. The itinerary information includes one or more associations of a residence time with locations. The search database is periodically searched during respective residence times for a compatible individual located in the associated at least one location.

5 In other embodiments of the present invention, methods, systems and computer program products are provided for identifying a compatible individual in a specified region. A connection is established between a wireless terminal and a search database device over a wireless communication network. A location of the wireless terminal is determined using either a global positioning system (GPS) or a
10 land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated positioning system. A registration request is transmitted to the search database over the connection. The registration request includes the determined location. Notification of a compatible individual in a
15 specified region including the determined location is received from the search database over the connection. The connection may be based on a protocol selected from the group consisting of Wireless Application Protocol (WAP), Cellular Digital Packet Data (CDPD), Circuit Switched Data (CSD), General Packet Radio Service (GPRS), Short Message Service (SMS) and Unstructured Supplementary Services
20 Data (USSD). The wireless communication service may communicate with the server over an Internet Protocol (IP) network and the connection may include IP based communications over the IP network.

 In further embodiments of the present invention, methods, systems and computer program products are provided for identifying a compatible individual in a
25 specified region. A registration request is received at a search database from a mobile device. The registration request includes a profile identifier associated with a user of the mobile device and further includes location information for the mobile device identifying a location in the specified region. A profile associated with the profile identifier is obtained. It is determined if a compatible individual is located within the
30 specified region based on the profile and the location information. The user associated with the mobile device is notified if a compatible individual is located. A profile is obtained by first determining if the profile identifier includes the profile. A saved profile associated with a profile identifier code from the profile identifier is obtained if the profile identifier does not include the profile. The profile is requested

from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code.

Profile information is initially obtained from the user. A profile identifier code is associated with the obtained profile information. The obtained profile information is saved as a profile associated with the profile identifier code. Changes to the profile information are obtained from the user. The profile associated with the profile identifier code is updated. A new profile identifier code is assigned to the updated profile. The updated profile is saved in place of the profile associated with the profile identifier code, the updated profile being associated with the new profile identifier code.

In yet further embodiments of the present invention, server systems are provided for identifying a compatible individual in a specified region. The server is located remote from the specified region. The server includes a communication interface that receives a registration request at the server from a mobile device. The registration request includes a profile identifier associated with a user of the mobile device and further includes location information for the mobile device identifying a location in the specified region. The server further includes a database that includes a plurality of profiles, each of the profiles being associated with a profile identifier and a check-in circuit that obtains a profile associated with the profile identifier from the database. A search circuit determines if a compatible individual is located within the specified region based on the profile and the location information using the database. The communication interface is further configured to notify the user associated with the mobile device if a compatible individual is located. The compatible individual may also be notified.

In yet other embodiments of the present invention mobile devices are provided for identifying a compatible individual in a specified region. The mobile device includes a transceiver circuit that establishes a connection between the mobile device and a search database device over a wireless communication network. A positioning circuit determines a location of the wireless terminal using either a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated positioning system. The transceiver circuit is configured to transmit a registration request to the search database over the connection, the registration request including the determined location. The

transceiver circuit is further configured to receive notification of a compatible individual in a specified region including the determined location from the search database over the connection.

The present invention will now be further described with reference to the block diagram of Figure 2 which illustrates data processing systems according to embodiments of the present invention. As illustrated in Figure 2, the system 230 may include input device(s) 232 such as a keyboard or keypad, a display 234, and a memory 236 that communicate with a processor 238. The data processing system 230 may further include a storage system 242, a speaker 244 and an I/O data port(s) 246 that also communicate with the processor 238. The storage system 242 may include removable and/or fixed media such as floppy disks, ZIP drives, hard disks or the like as well as virtual storage such as a RAMDISK. The I/O data port(s) 246 can be used to transfer information between the data processing system 230 and another computer system or a network (*e.g.*, the Internet). Such data processing systems may include, for example, personal computers, laptop computers, mainframe computers, pervasive computing devices such as personal digital assistants, smartphones or the like, or even embedded processing systems. The components of a particular data processing system may be conventional or custom components, such as those used in many conventional computing devices; which may be configured to operate as described herein.

Figure 3 is a block diagram of a data processing system that illustrates systems, methods, and computer program products in accordance with embodiments of the present invention. The processor 238 communicates with the memory 236 via an address/data bus 237. The processor 238 can be a commercially available or custom microprocessor. The memory 236 is representative of the overall hierarchy of memory devices containing the software and data used to implement the functionality of the data processing system 230. The memory 236 can include, but is not limited to, the following types of devices: cache, ROM, PROM, EPROM, EEPROM, flash memory, SRAM, and DRAM.

As shown in Figure 3, the memory 236 may contain several categories of software and data used in the data processing system 230: the operating system 320; the application program 340; the input/output (I/O) device drivers 315; and the data 310. As will be appreciated by those of skill in the art, the operating system 320 may be any operating system suitable for use with a data processing system, such as OS/2,

AIX or OS/390 from International Business Machines Corporation, Armonk, NY, WindowsCE, WindowsNT, Windows95, Windows98 or Windows2000 from Microsoft Corporation, Redmond, WA, PalmOS from Palm, Inc., MacOS from Apple Computer, UNIX or Linux, proprietary operating systems or dedicated operating systems, for example, for embedded data processing systems.

The I/O device drivers 315 typically include software routines accessed through the operating system 320 by the application program 340 to communicate with devices such as the input devices 232, the display 234, the speaker 244, the storage system 242, the I/O data port(s) 246, and certain memory 236 components.

The application program 340 is illustrative of the programs that implement the various features of the data processing system 230. Finally, the data 310 represents the static and dynamic data used by the application program 340, operating system 320, I/O device drivers 315, and other software programs that may reside in the memory 236.

As is further seen in Figure 3, the application program 340 preferably includes the communication circuit 325 and the search circuit 330. The data 310 as shown in Figure 3 includes a profile database 345 and a profile index 350. The profile database 345 and the profile index 350 may be integrated into a single data structure. The communication circuit 325 in cooperation with the I/O device drivers 315 and the I/O data port(s) 246 provides a communication interface that receives a registration request at the data processing system 230, such as the server 105, from a mobile device, such as the wireless terminal 130. The received registration request includes a profile identifier associated with a user of the mobile device and further includes location information for the mobile device. The received location information is used to identify the specified region in which a compatible individual is sought. It is to be understood that the term "registration request" as used herein is not limited to communications related to setting up profiles or establishing a service but more generally refers to communications from a user to a service provider.

The profile database 345 provides a database that includes a plurality of profiles, each of the profiles being associated with a profile identifier. As shown in the illustrated embodiments of Figure 3, a profile index 350 provides a list of profile identifiers for which a corresponding profile is maintained in the profile database 345. The use of such a separate profile index 350 may facilitate searching of the profile database 345 in optional embodiments of the present invention. The search circuit 330 is configured to determine if a compatible individual is located within the

specified region, based on the profile associated with the profile identifier received in the registration request and the location information received in the registration request, using the profile database 345.

The communication circuit 325 is further configured to notify a user
5 associated with the requesting mobile device if a compatible individual is successfully located. The communication circuit 325, in various embodiments, may further notify the requesting device when no compatible individual is located. The communication circuit 325 may further be configured to initiate contact between a requesting user of a mobile device and the located compatible individual. For example, the compatible
10 individual may be a user of the second mobile device and the communication circuit 325 may be configured to establish an anonymous connection between the requesting mobile device and the second mobile device.

Figure 4 illustrates an exemplary mobile device 400, such as a wireless mobile terminal, according to embodiments of the present invention. The mobile
15 terminal 400 includes, in a housing 401, a transceiver (*i.e.*, receiver and transmitter) 472 that is operative to transmit and receive RF communication signals via an antenna 410 under control of a controller 470. The controller 470 may include a speech/data processing circuit 476 as well as other functional modules not illustrated in Figure 4 but which will be understood to those of skill in the art related to wireless
20 communications including both data and voice communication support. As used herein, the speech/data processing circuit 476 may include components such as demodulators, decoders, interleavers and RF processor circuitry.

The controller 470, such as a microprocessor, microcontroller or similar data processing device, may execute program instructions stored in a memory 460 of the
25 mobile terminal 400, such as a dynamic random access memory (DRAM), electrically erasable programmable read-only memory (EEPROM) or other storage device. The controller 470 is further operatively associated with user interface components of the mobile terminal 400 such as a display 420, a keypad 430, a speaker 440, and a microphone 450, operations of which are known to those of skill in the art and will
30 not be further discussed herein.

The transceiver 472 provides a communication circuit including a receiver that receives wireless communications 482 from a search database engine, such as the server 105, and may further receive location system signals from a land based system or from GPS satellites, such as the GPS satellite 135. The transceiver 472 may

further operate to provide such signals from the location system to the GPS circuit 474 and from the search database engine to the I/O circuit 478.

The GPS circuit 474 is configured to determine a location of the wireless terminal. As shown in the embodiments of Figure 4, the GPS circuit 474 determines a location of the wireless terminal 400 using a global positioning system (GPS). In alternative embodiments, a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal 400 and the land based automated positioning system may be utilized by the positioning circuit 474 to allow the mobile terminal 400 to determine its location. It is to be understood that, as used herein, "GPS" is intended to encompass not only the United States satellite based system commonly using such designation but similar systems, such as Glonass, or other subsequently developed satellite based location systems. Furthermore, as used herein, "land based automated positioning system" is intended to encompass hybrid systems including satellite components.

The I/O circuit 478, in cooperation with the transceiver 472, is configured to transmit a registration request to a search database, such as the server 105, over a connection between the mobile terminal 400 and a search database, such as the server 105. The registration request, in various embodiments, includes the determined location from the GPS circuit 474. The I/O circuit 478, in cooperation with the transceiver 472, is further configured to receive notification of a compatible individual in a specified region such as where the mobile terminal 400 is located, from the server 105 over the established connection. Information utilized to initiate contact between the user of the mobile terminal 400 and a compatible individual may also be received by the I/O circuit 78 through the transceiver 472.

It will be appreciated that the transceiver 472, the speech/data processing circuit 476 and other components of the mobile terminal 400 (as well as circuitry illustrated in Figures 1 through 3) may be implemented using a variety of hardware and software. For example, operations of the transceiver 472 and/or the speech/data processing circuit 476 may be implemented using special-purpose hardware, such as an application specific integrated circuit (ASIC) and programmable logic devices such as gate arrays, and/or software or firmware running on a computing device such as a microprocessor, microcontroller or digital signal processor (DSP). It will also be appreciated that, although functions of the transceiver 472 and the other circuits

shown in Figure 4 may be integrated in a single device, such as a single ASIC microprocessor, they may also be distributed among several devices. Aspects of these circuits may also be combined in one or more devices, such as an ASIC, DSP, microprocessor or microcontroller. These various implementations using hardware, software, or a combination of hardware and software will generally be referred to herein as "circuits."

Operations according to embodiments of the present invention for identifying a compatible individual in a specified region using a server located remote from the specified region will now be further described with reference to the flow chart illustration of Figure 5. Operations begin at block 500 with receipt of a registration request from a mobile device. The registration request includes a profile identifier associated with the user of the mobile device and further includes location information for the mobile device. More particularly, the location information is within a specified region and, thus, identifies a specified region for which identification of a compatible individual is desired. The registration request may be received, for example, from a wireless terminal 130 at a server 105 in various embodiments of the present invention. The registration request may be transmitted from the wireless terminal 130, for example, responsive to a user activating a compatible individual search function of the wireless terminal 130. Upon activation of the compatible individual search function, the wireless terminal 130 may generate location information as will be further described later herein.

A server or other search database receiving a registration request obtains a profile associated with the profile identifier as will be described for the illustrated embodiments of Figure 5 with reference to blocks 505-520. It is first determined if the provided profile identifier included in the registration request includes the profile, as contrasted with merely being a code associated with such profile information (block 505). If the profile itself is included in the registration request (block 505), operations move to block 525 to determine if a compatible individual may be found in the specified location. If the profile is not included in the registration request (block 505), the search database seeks to obtain a saved profile associated with the profile identifier code provided as the profile identifier (block 510). In other words, the profile identifier included in the registration request could be the profile itself or a profile identifier code which may be used by the search database to obtain the associated profile information from a database accessible to the search database. If a

profile is located in a database accessible to the search database (block 515), the located profile information is utilized at block 525 to search for a compatible individual. If no saved profile is associated with the profile identifier code (block 515), the profile is requested from the user of the mobile device (block 520).

5 The search database determines if a compatible individual is located within the specified region based on the obtained profile and the location information from the registration request (block 525). The user of the requesting mobile device is notified if a compatible individual is located (block 530). In various embodiments of the present invention, as illustrated in Figure 5, the search database may further initiate
10 contact between the user of the mobile device requesting a search and the located compatible individual (block 535). For example, an anonymous connection between the requesting mobile device and a second mobile device associated with a located compatible individual may be established by the search database. A variety of methodologies could be utilized for establishing a connection, and, more particularly,
15 an anonymous connection, such as establishing an instant messaging (IM) session using anonymous identities, exchanging short message service (SMS) messages between the requesting mobile device and a second mobile device associated with the compatible individual with personal identification information removed or by providing anonymous message posting for the user of the requesting mobile device
20 and the compatible individual. Alternatively, the user of the requesting mobile device and a compatible individual may be provided direct contact information.

 Thus, as described above, a search database, such as the remote server 105, may determine that a match exists and inform a requesting mobile device user and a compatible individual of the identification of a match. If no current match exists, the
25 server 105 may inform the requesting mobile device user of the failure to determine a match. The server 105 may also present information to assist the user of the mobile device in contacting the compatible individual. In the simplest case, where direct contact is to be initiated, the profiles of the respective users may contain contact information such as a phone number, SMS number (if different), e-mail address, chat
30 name, etc. which is provided to the compatible individual upon achieving a match. The individuals may then utilize the information provided by the server 105 to make contact independent of the server 105.

 The ability of the server 105 to establish an anonymous initial contact may be desirable where users want a certain amount of privacy, at least initially, in the

matching process. For example, they may want to be considered for matches but may not want to provide personal information, such as a phone number or e-mail or even a chat name. In this instance, an anonymous connection can be supported by the server 105, as described above, using IM, SMS or a bulletin board. The IM session may
5 utilize anonymous identities assigned for each party. For the SMS communication, the server 105 could act as a filter of the SMS messages between the parties by stripping personal information and forwarding the messages. The bulletin board provided by the server 105 could be made accessible to the individuals, for example, using wireless application protocol (WAP). Access could also be directly over the IP
10 network 125 using a variety of different known gateways for accessing such bulletin boards from Internet compatible devices. Ultimately, the individual users could convert from an anonymous communication to a direct communication. Alternatively, if after an initial IM or SMS session which has been supported by the server 105 users wish to proceed while remaining anonymous, the server 105 may, for
15 example, create an anonymous IM, SMS or message posting service for subsequent contacts.

Operations according to various embodiments of the present invention from the perspective of the mobile device, such as a wireless terminal 130, will now be further described with reference to the flowchart illustration of Figure 6. Operations
20 begin at block 600 with establishing a connection with a search database, for example the server 105, over a wireless communication network 120. The wireless terminal 130 determines the location of the wireless terminal (block 610). This location information may be self generated via a location determination capability supported by the wireless terminal 130 or, in various embodiments of the present invention, may
25 be provided by user input. The wireless network 120 may, alternatively, be utilized to automatically generate location information on the wireless terminal 130 and provide such information to the server 105. In embodiments using automated determination by the wireless terminal 130, the location may be determined using the global positioning system (GPS) or, alternatively, a land based automated positioning system
30 configured to determine the location of the wireless terminal 130 based on wireless communications between the wireless terminal 130 and the land based automated positioning system. The land based automated positioning system may be an integrated part of the wireless network 120 or a separate system to which the wireless terminal 130 has access.

The wireless terminal 130 transmits the registration request to a search database such as the server 105 over the established connection (block 620). The transmission of the registration request may require some type of log-in function depending upon the controls desired for particular applications. The connection used
5 for transmission of the registration request at block 620 may, for example, utilize a protocol such as the wireless application protocol (WAP) or cellular digital packet data (CDPD). Alternative suitable connection methods include short message service (SMS), circuit switch data (CSD), unstructured supplementary services data (USSD), general packet radio service (GPRS), *etc.*

10 As described generally above with reference to Figure 5, on receipt of the registration request, the search database performs a search comparing the profile of the requesting individual to others in the specified area to find a compatible individual. The wireless terminal 130 receives notification of a compatible individual from the search database over the established connection (block 630). Note that the
15 established connection utilized for transmitting a request and receiving a notification need not be a continuous session as it may be provided over packet based protocols. Thus, as used herein, the term "connection" encompasses both assigned channel communications and periodic packet transmissions at regular or irregular intervals such as provided for by the Internet protocol.

20 Operations related to searching for compatible individuals according to various embodiments of the present invention will now be further described with reference to the flowchart illustration of Figure 7. Operations begin at block 700 when the search database obtains search criteria. Such search criteria may be obtained as part of the registration request from the requesting mobile device. For
25 example, a user's location information may designate a home (local) location or a visiting (roaming) location for the user of the mobile device. Thus, profile information on an individual may designate whether their association with a specified location is as a roamer or a local area and both roamers and local area profiles may be maintained and searched in the profile database. Thus, it may be desirable under
30 various circumstances to allow a requesting user the capability of searching for local individuals or roamer individuals within the specified region, or both, depending upon the requesting user's preference.

It is also possible that, under various circumstances, a user of the mobile device may enter the specified area and remain in that area for some extended

duration of stay, such as all day, all week, *etc.* Therefore, the registration request initiating a search may include search criteria specifying a designation of duration of stay. For example, a user may specify that the user will be resident in the specified area for two days and may have the option of becoming a "temporary" resident of that specified area. The user could then be used in subsequent new searches by other visiting users as a current resident until the visit duration has expired. In such a case, as illustrated in the embodiments of Figure 7, any profile associated with the profile identifier from the registration request may be placed in the search database for the duration of stay (block 710). However, the user may also specify that the user's profile not be included in the search database.

The registration request may also include search type/criteria which may also be utilized by the search database (block 715). For example, the search database may accommodate periodically searching on more than one occasion, for example, search every two hours, *etc.* throughout the duration of stay or other specified period. The search criteria also may specify the performance of searches at a certain time or during a certain time window, for example, start searching at 5:00 p.m. and repeat every hour thereafter until 10:00 p.m. Further, the user may independently control when their profile may be included in other users' searches as contrasted with initiating searches on their behalf. Thus, periodic searching of the search database for a compatible individual for the duration of stay may include only performance of an initial search (block 720) or further searches. If more searches beyond the initial search are desired (block 725), additional searches are performed according to the provided search criteria (block 730). Otherwise, if additional searches are not required (block 725), periodic searching only includes the initial search and operations cease until another request is received. The periodic searching may be on an irregular basis as specified by a requesting user and need not follow a mandated uniform pattern. Furthermore, a stop searching capability may be provided to the user of the wireless terminal 130. This would allow such a user to inform the search database that no additional searches are required. For example, if a successful match with a compatible individual has been achieved, the user may (or may not) wish to terminate further searches.

Referring now to the flowchart illustration of Figure 8, operations related to establishing and updating user profiles will be further described according to various embodiments of the present invention. Operations begin at block 800 when initial

profile information is obtained. This profile information may include information related both to the user associated with the profile and the characteristics of the person the user is searching for as a compatible individual. This information may be provided from a mobile device, such as the wireless terminal 130, to a search
5 database, such as the server 105, as part of a service set up via the Internet, by telephone, or through another initial contact. Alternatively, the user may provide the profile information with each registration request to the server 105. For example, a user may belong to a first dating club that has a stored profile for the user. The user may then discover another dating club site, for example, while roaming, in which the
10 user is not yet enrolled and to which the user may wish to register, thereby, likely, requiring re-transmission of profile information. While initial communication of a profile information packet and setting up of an account is described herein as using Internet access, this is simply an option for registration and other means may be utilized for conveying such information to the search database. A variety of standard
15 or nonstandard information exchanged formats may be utilized so long as both the receiving and providing systems are compatible and support the format being utilized.

A profile identifier code is associated with the profile information (block 805). The obtained profile information is saved as a profile associated with the profile identifier code (block 810). For example, the profiles with the profile identifier might
20 be stored in the profile database 345 and an index of profile identifier codes for which profiles are maintained in the profile database 345 may be stored in the profile index 350.

At some subsequent time, changes to the profile information are obtained from the user (block 815). The profile associated with the profile identifier code is updated
25 based on the changed information (block 820). A new profile identifier code is assigned to the updated profile (block 825). The updated profile is saved in place of the previous profile associated with the initial profile identifier code with the updated profile being associated with the new profile identifier code generated at block 825 (block 830). Thus, utilizing the embodiments illustrated in Figure 8 where the profile
30 identifier code is unique to a profile, rather than uniquely assigned to a user, the profile identifier code itself may be utilized to determine if updated profile information is required at the search database when a registration request including the profile identifier code is received. Only the profile identifier code need then be exchanged as part of the registration request. If the profile number has changed, the

profile identifier code of the updated profile information will not appear, for example, in the profile index 350, and new profile information may be requested from the user. Furthermore, an individual user may maintain a plurality of profile identifiers, for example, one associated with a profile used for locating a date and another associated with a profile used for finding a tennis partner. Thus, the wireless terminal 130 may include the profile identifier code as well as the underlying profile information for a current profile associated with the user which profile information may be provided as necessary when the search database does not have the most current information for the user.

Referring now to the flowchart illustration of Figure 9, operations according to further embodiments of the present invention will now be described. Operations begin at block 900 when a user of a mobile device configures the user's profile including a desired profile for a compatible individual. A variety of information may be input, for example, using a vCard (block 905). The mobile user activates a "MateFinder" compatible individual finder function on the user's mobile device (block 910). In the illustrated embodiment, the mobile assesses its position by GPS, time of arrival (TOA) or other means (block 915). Position information is thus determined (block 920). Time of arrival or received signal strength indication (RSSI) reports are alternative methods of determining a location for the wireless device which may be supported by the wireless communication network 120. This information may also be entered, in various embodiments of the present invention, manually by the user. For example, a location look up entry interface may be supported by the server 105 which guides the user through a location selection, for example, United States > North Carolina > Raleigh. The location information for use in the search may be based on position specifics (for example, find someone within 5 miles of point A) or be based on a place name (for example, find someone in Lund, Sweden) to specify the region where a compatible individual is desired. Location information may further include the search criteria (or information contained in the profile itself) describing other aspects such as mobility (for example, I have a vehicle and can travel) or desired range (for example, I am willing to travel up to 50 miles to meet a compatible individual).

The mobile then establishes a connection to the gateway server (block 925). This connection may be used to transfer profile information as needed along with the registration request (block 930). The gateway server may then determine location and

profile information from the request from the mobile and perform a comparison to other candidate individuals (block 935). The gateway server information database may specify local individuals who are usually present in the specified region or roamer designations temporarily resident in the specified region (block 940). If a
5 match is found (block 945), a user is notified that there has been a match (block 950). If no match is found (block 945) the gateway server may inform the user that there is no match (block 947) and, optionally, place the requesting user in the search database for the user's stay duration for subsequent searches responsive to search criteria specified by the user (block 949).

10 Where a match is obtained, it is determined if a direct contact method is pre-specified (block 955). If direct contact is pre-specified (block 955), the user is provided contact information and may initiate contact with the compatible individual using a variety of methodologies (block 957).. If direct contact is not pre-specified (block 955), the gateway server may inform both parties of the detection of a match
15 and request selection of anonymous contact or direct contact (block 960). The individual users may thus be queried to determine if they desire direct contact information to be provided rather than anonymous contact (block 965). If so, the contact information is provided to both users (block 967). Operations proceed as described previously for block 957.

20 When anonymous contact is preferred (block 965), the gateway server coordinates the contact method (block 970). As shown in the embodiments of Figure 9, the gateway server may schedule a contact as necessary (block 975) and coordinate the contact session (block 980). The users themselves may then assess the need to continue further contact anonymously or otherwise (block 985).

25 Scheduling and coordination operations at block 975 and 980 may support matching a mobile user that is roaming in a region with those who may not be mobile (*i.e.*, users that are resident (local) in the specified area). Under such circumstances, there may be instances where the matched parties are not immediately available. The gateway server in various embodiments, may then provide for coordination of a
30 process of setting up a mutually acceptable contact (time and/or method). For example, the gateway server might set up an 8:00 p.m. instant messaging session. The approach used for coordination of a contact may vary, for example, it may make sense to use calendar information from the mobile device of a requesting user or solicit such information from a resident user. In other words, for example, an

electronic calendar maintained on the mobile device of a user may automatically transfer schedule information and availability information to the gateway server for use in selecting a mutually acceptable contact session time. Optionally, a user may be provided the capacity to "block out" certain times in his calendar for potential session creation. Thus, this process may be an automated process based on information
5 already in a calendar or may be an iterative process whereby the user is contacted and prompted for information about suitable times for a subsequent contact session which is being created. There could, for example, be an automated process whereby the gateway server queries the mobile device transparently to the user (*i.e.*, the user does
10 not know this transaction is occurring).

Once this schedule information has been collected from the compatible individuals, the gateway server may use the information to schedule a mutually convenient contact session. The process may further incorporate a reserve and confirm process for scheduling of the subsequent meet. Likewise, the gateway server
15 may coordinate the contact method as well as the time. For example, if the preferred method of contact for both parties is an IM session, then the gateway server may set up an IM session at the agreed upon time. Where the two compatible individuals have differing preferred contact methods, the gateway server could further coordinate the method to be used for each specific contact session.

20 It is also to be understood that the location information provided to the server in the registration request need not be the location where the mobile device is currently located. For example, it may be desired to provide a pre-searching capability in the search database based on an itinerary (or schedule) of travels for a user (for example, I will be in Memphis on Tuesday). The gateway server may
25 include a physical location to place name correlation database to facilitate such itinerary scheduling. For example, the gateway server may know latitude and longitude information for various place names as the requesting user may not be able to provide such position specific location information related to locations in which the mobile device is not currently present. The location information provided in a
30 registration request may be an itinerary specifying one or more place locations and a corresponding schedule of dates and/or times when a user will be present in these respective locations. Thus, the itinerary information may include a residence time for each of one or more locations. Search operations for a respective registration request may include periodically searching the designated locations during the associated

respective residence times for a compatible individual located in the associated locations during those residence times.

For example, based on the itinerary information, the gateway server may, in advance, establish a user as a temporary resident for each of the planned itinerary locations. The user then may not need to "check in" upon arrival at each destination to be considered for searches. For example, if user "A" schedules a visit to London, then if another roamer (user "B") initiates a search during that period of time (residence) when user "A" said he would be in the area, then user "A" will be considered in the search. If a match is determined, both users may be notified and contact may be initiated as described previously. Furthermore, operations as described herein for finding a compatible individual in accordance with various embodiments of the present invention may also be operated and coordination with existing date finder services, such as those limited to locally placed coordination stations and pagers, for example, in an individual restaurant or other limited geographic region.

Operations of the present invention have been described with respect to the block diagram illustration of Figures 1 through 3 and the flowchart illustrations of Figures 5 through 9. It will be understood that each block of the flowchart illustrations and the block diagram illustrations of Figures 1 through 9, and combinations of blocks in the flowchart illustrations and the block diagram illustrations, can be implemented by computer program instructions. These program instructions may be provided to a processor to produce a machine, such that the instructions which execute on the processor create means for implementing the functions specified in the flowchart and block diagram block or blocks. The computer program instructions may be executed by a processor to cause a series of operational steps to be performed by the processor to produce a computer implemented process such that the instructions which execute on the processor provide steps for implementing the functions specified in the flowchart and block diagram block or blocks.

Accordingly, blocks of the flowchart illustrations and the block diagrams support combinations of means for performing the specified functions, combinations of steps for performing the specified functions and program instruction means for performing the specified functions. It will also be understood that each block of the flowchart illustrations and block diagrams, and combinations of blocks in the

flowchart illustrations and block diagrams, can be implemented by special purpose hardware-based systems which perform the specified functions or steps, or combinations of special purpose hardware and computer instructions. For example, the I/O circuit 478 may be implemented as code executing on a processor, as
5 integrated circuit devices, such as signal processors or custom chips, or as a combination of the above.

The flowcharts and block diagrams of Figures 1 through 9 illustrate the architecture, functionality, and operation of possible implementations of systems, methods and computer program products for identifying a compatible individual in a
10 specified region according to various embodiments of the present invention. In this regard, each block in the flow charts or block diagrams may represent a module, segment, or portion of code, which comprises one or more executable instructions for implementing the specified logical function(s). It should also be noted that, in some alternative implementations, the functions noted in the blocks may occur out of the
15 order noted in the figures. For example, two blocks shown in succession may, in fact, be executed substantially concurrently, or the blocks may sometimes be executed in the reverse order, depending upon the functionality involved.

In the drawings and specification, there have been disclosed typical illustrative embodiments of the invention and, although specific terms are employed, they are
20 used in a generic and descriptive sense only and not for purposes of limitation, the scope of the invention being set forth in the following claims.

WHAT IS CLAIMED IS:

1. A method for identifying a compatible individual in a specified region using a server located remote from the specified region, the method comprising:
 - 5 receiving a registration request at the server from a mobile device, the registration request including a profile identifier associated with a user of the mobile device and further including location information for the mobile device, the location information identifying a location in the specified region;
 - obtaining a profile associated with the profile identifier;
 - 10 determining if a compatible individual is located within the specified region based on the profile and the location information; and
 - notifying the user associated with the mobile device if a compatible individual is located.
- 15 2. The method of Claim 1 wherein the step of obtaining a profile comprises the steps of:
 - determining if the profile identifier includes the profile;
 - obtaining a saved profile associated with a profile identifier code from the profile identifier if the profile identifier does not include the profile; and
 - 20 requesting the profile from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code.
- 25 3. The method of Claim 2 further comprising the steps of:
 - obtaining profile information from the user;
 - associating a profile identifier code with the obtained profile information;
 - saving the obtained profile information as a profile associated with the profile identifier code;
 - obtaining changes to the profile information from the user;
 - 30 updating the profile associated with the profile identifier code;
 - assigning a new profile identifier code to the updated profile; and

saving the updated profile in place of the profile associated with the profile identifier code, the updated profile being associated with the new profile identifier code.

- 5 4. The method of Claim 1 wherein the mobile device is a wireless terminal configured to communicate over a wireless communication network, the method further comprising the steps performed by the wireless terminal of:
- establishing a connection with the server over the wireless communication network;
- 10 determining the location of the wireless terminal using at least one of a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated positioning system;
- transmitting the registration request to the server over the connection, the
- 15 registration request including the determined location as the location information for the wireless terminal; and
- receiving notification of a compatible individual from the server over the connection.

- 20 5. The method of Claim 4 wherein the connection is based on a protocol selected from the group consisting of Wireless Application Protocol (WAP), Cellular Digital Packet Data (CDPD), Circuit Switched Data (CSD), General Packet Radio Service (GPRS), Short Message Service (SMS) and Unstructured Supplementary
- Services Data (USSD).

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6. The method of Claim 5 wherein the wireless communication service communicates with the server over an Internet Protocol (IP) network and wherein the connection includes IP based communications over the IP network.

- 30 7. The method of Claim 1 wherein the connection is based on a protocol selected from the group consisting of Wireless Application Protocol (WAP), Cellular Digital Packet Data (CDPD), Circuit Switched Data (CSD), General Packet Radio Service (GPRS), Short Message Service (SMS) and Unstructured Supplementary
- Services Data (USSD).

8. The method of Claim 7 wherein the wireless communication service communicates with the server over an Internet Protocol (IP) network and wherein the connection includes IP based communications over the IP network.

5 9. The method of Claim 7 further comprising the step performed by the server of initiating contact between the user of the mobile device and the compatible individual.

10 10. The method of Claim 9 wherein the compatible individual is a user of a second mobile device and where the step of initiating contact further comprises the step of establishing an anonymous connection between the mobile device and the second mobile device.

15 11. The method of Claim 9 wherein the step of initiating contact further comprises at least one of establishing an instant messaging (IM) session using anonymous identities, exchanging SMS messages between the mobile device and a second mobile device associated with the compatible individual with personal identification information removed or providing anonymous message posting for the user of the mobile device and the compatible individual.

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12. The method of Claim 9 wherein the step of initiating contact further comprises the step of providing the user of the mobile terminal and the compatible individual contact information.

25 13. The method of Claim 9 wherein the step of initiating contact further comprises the step of scheduling a contact time for the user of the mobile device and the compatible individual based on information obtained from at least one of the profile, a profile associated with the compatible individual, schedule information received from the mobile device in the registration request, schedule information
30 received from a schedule database or schedule information received from the mobile device responsive to the notification of a compatible individual.

14. The method of Claim 1 wherein the registration request includes search criteria and wherein the step of determining if a compatible individual is located

within the specified region comprises the step of searching a database containing profiles for a plurality of candidate individuals for a match with the profile associated with the profile identifier based on the search criteria.

5 15. The method of Claim 14 wherein ones of the profiles for the plurality of candidate individuals include a designation of at least one of a local individual for the specified region or a roamer individual for the specified region and wherein the search criteria includes a designation of at least one of local or roamer individual and wherein the step of searching the database further comprises the step of searching for
10 profiles containing the designated at least one of local or roamer individual for the specified region.

 16. The method of Claim 14 wherein the search criteria includes a designation of duration of stay, the method further comprising at least one of:
15 placing the profile associated with the profile identifier in the search database for the duration of stay; and
 periodically searching the search database for a compatible individual for the duration of stay.

20 17. The method of Claim 16 wherein the search criteria further includes a designation of search timing and wherein the step of periodically searching comprises the step of periodically searching the search database for a compatible individual for the duration of stay at times based on the designation of search timing.

25 18. The method of Claim 14 wherein the search criteria includes itinerary information, the itinerary information including at least one association of a residence time with at least one location and wherein the step of periodically searching further comprises the step of periodically searching the search database for a compatible individual during respective residence times for a compatible individual located in the
30 associated at least one location for the respective residence time.

 19. A method for identifying a compatible individual in a specified region:
 establishing a connection between a wireless terminal and a search database device over a wireless communication network;

determining a location of the wireless terminal using at least one of a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated positioning system;

5 transmitting a registration request to the search database over the connection, the registration request including the determined location; and

receiving notification of a compatible individual in a specified region including the determined location from the search database over the connection.

10 20. The method of Claim 19 wherein the connection is based on a protocol selected from the group consisting of Wireless Application Protocol (WAP), Cellular Digital Packet Data (CDPD), Circuit Switched Data (CSD), General Packet Radio Service (GPRS), Short Message Service (SMS) and Unstructured Supplementary Services Data (USSD).

15

21. A method for identifying a compatible individual in a specified region: receiving a registration request at a search database from a mobile device, the registration request including a profile identifier associated with a user of the mobile device and further including location information for the mobile device, the location information identifying a location in the specified region;

20

obtaining a profile associated with the profile identifier; determining if a compatible individual is located within the specified region based on the profile and the location information;

25

notifying the user associated with the mobile device if a compatible individual is located;

wherein the step of obtaining a profile comprises the following steps:

determining if the profile identifier includes the profile;

obtaining a saved profile associated with a profile identifier code from the profile identifier if the profile identifier does not include the profile;

30

requesting the profile from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code;

obtaining profile information from the user;

associating a profile identifier code with the obtained profile information;

saving the obtained profile information as a profile associated with the profile identifier code;

obtaining changes to the profile information from the user;

updating the profile associated with the profile identifier code;

5 assigning a new profile identifier code to the updated profile; and

saving the updated profile in place of the profile associated with the profile identifier code, the update profile being associated with the new profile identifier code.

22. A server system for identifying a compatible individual in a specified
10 region, the server being located remote from the specified region, the server comprising:

a communication interface that receives a registration request at the server from a mobile device, the registration request including a profile identifier associated with a user of the mobile device and further including location information for the
15 mobile device, the location information identifying a location in the specified region;

a database that includes a plurality of profiles, each of the profiles being associated with a profile identifier;

a check-in circuit that obtains a profile associated with the profile identifier from the database;

20 a search circuit that determines if a compatible individual is located within the specified region based on the profile and the location information using the database; and

wherein the communication interface is further configured to notify the user associated with the mobile device if a compatible individual is located.

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23. The server system of Claim 22 wherein the mobile device is a wireless terminal configured to communicate over a wireless communication network, the wireless terminal further comprising:

30 a transceiver circuit that establishes a connection between the mobile device and the server over the wireless communication network;

a positioning circuit that determines a location of the wireless terminal using at least one of a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless

communications between the wireless terminal and the land based automated positioning system;

wherein the transceiver circuit is configured to transmit a registration request to the server over the connection, the registration request including the determined

5 location; and

wherein the transceiver circuit is further configured to receive notification of a compatible individual in a specified region including the determined location from the server over the connection.

10 24. The system of Claim 23 wherein the connection is based on a protocol selected from the group consisting of Wireless Application Protocol (WAP), Cellular Digital Packet Data (CDPD), Circuit Switched Data (CSD), General Packet Radio Service (GPRS), Short Message Service (SMS) and Unstructured Supplementary

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25. The system of Claim 24 wherein the wireless communication network communicates with the server over an Internet Protocol (IP) network and wherein the connection includes IP based communications over the IP network.

20 26. The system of Claim 22 wherein the connection is based on a protocol selected from the group consisting of Wireless Application Protocol (WAP), Cellular Digital Packet Data (CDPD), Circuit Switched Data (CSD), General Packet Radio Service (GPRS), Short Message Service (SMS) and Unstructured Supplementary

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27. The system of Claim 26 wherein the wireless communication network communicates with the server over an Internet Protocol (IP) network and wherein the connection includes IP based communications over the IP network.

30 28. The system of Claim 26 wherein the communication interface is further configured to initiate contact between the user of the mobile device and the compatible individual.

29. The system of Claim 28 wherein the compatible individual is a user of a second mobile device and wherein the communication interface is further configured to establish an anonymous connection between the mobile device and the second mobile device.

5

30. The system of Claim 28 wherein the communication circuit is further configured to at least one of establish an instant messaging (IM) session using anonymous identities, exchange SMS messages between the mobile device and a second mobile device associated with the compatible individual with personal
10 identification information removed or provide anonymous message posting for the user of the mobile device and the compatible individual.

31. The system of Claim 28 wherein the communication circuit is further configured to provide the user of the mobile terminal and the compatible individual
15 contact information.

32. A mobile device for identifying a compatible individual in a specified region, the mobile device comprising:

a transceiver circuit that establishes a connection between the mobile device
20 and a search database device over a wireless communication network;

a positioning circuit that determines a location of the wireless terminal using at least one of a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated
25 positioning system;

wherein the transceiver circuit is configured to transmit a registration request to the search database over the connection, the registration request including the determined location; and

wherein the transceiver circuit is further configured to receive notification of a
30 compatible individual in a specified region including the determined location from the search database over the connection.

33. A system for identifying a compatible individual in a specified region using a server located remote from the specified region, the system comprising:

means for receiving a registration request at the server from a mobile device, the registration request including a profile identifier associated with a user of the mobile device and further including location information for the mobile device, the location information identifying a location in the specified region;

- 5 means for obtaining a profile associated with the profile identifier;
 means for determining if a compatible individual is located within the specified region based on the profile and the location information; and
 means for notifying the user associated with the mobile device if a compatible individual is located.

10

34. The system of Claim 33 wherein the means for obtaining a profile comprises:

- means for determining if the profile identifier includes the profile;
 means for obtaining a saved profile associated with a profile identifier code
15 from the profile identifier if the profile identifier does not include the profile; and
 means for requesting the profile from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code.

20

35. The system of Claim 34 wherein the server further comprises means for initiating contact between the user of the mobile device and the compatible individual.

36. The system of Claim 35 wherein the means for initiating contact
25 further comprises means for scheduling a contact time for the user of the mobile device and the compatible individual based on information obtained from at least one of the profile, a profile associated with the compatible individual, schedule information received from the mobile device in the registration request or schedule information received from the mobile device responsive to the notification of a
30 compatible individual.

37. The system of Claim 33 wherein the registration request includes search criteria and wherein the means for determining if a compatible individual is located within the specified region comprises means for searching a database

containing profiles for a plurality of candidate individuals for a match with the profile associated with the profile identifier based on the search criteria.

38. The system of Claim 37 wherein ones of the profiles for the plurality
5 of candidate individuals include a designation of at least one of a local individual for the specified region or a roamer individual for the specified region and wherein the search criteria includes a designation of at least one of local or roamer individual and wherein the means for searching the database further comprises means for searching
10 for profiles containing the designated at least one of local or roamer individual for the specified region.

39. The system of Claim 37 wherein the search criteria includes a designation of duration of stay, the server further comprising at least one of:
means for placing the profile associated with the profile identifier in the search
15 database for the duration of stay; and
means for periodically searching the search database for a compatible individual for the duration of stay.

40. The system of Claim 39 wherein the search criteria further includes a
20 designation of search timing and wherein the means for periodically searching comprises means for periodically searching the search database for a compatible individual for the duration of stay at times based on the designation of search timing.

41. The system of Claim 37 wherein the search criteria includes itinerary
25 information, the itinerary information including at least one association of a residence time with at least one location and wherein the means for periodically searching further comprises means for periodically searching the search database for a compatible individual during respective residence times for a compatible individual located in the associated at least one location for the respective residence time.

30

42. A system for identifying a compatible individual in a specified region, the system comprising:

means for establishing a connection between a wireless terminal and a search database device over a wireless communication network;

means for determining a location of the wireless terminal using at least one of a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated positioning system;

5 means for transmitting a registration request to the search database over the connection, the registration request including the determined location; and

means for receiving notification of a compatible individual in a specified region including the determined location from the search database over the

10 connection.

43. A system for identifying a compatible individual in a specified region, the system comprising:

means for receiving a registration request at a search database from a mobile

15 device, the registration request including a profile identifier associated with a user of the mobile device and further including location information for the mobile device, the location information identifying a location in the specified region;

means for obtaining a profile associated with the profile identifier;

means for determining if a compatible individual is located within the

20 specified region based on the profile and the location information;

means for notifying the user associated with the mobile device if a compatible individual is located;

wherein the means for obtaining a profile comprises:

means for determining if the profile identifier includes the profile;

25 means for obtaining a saved profile associated with a profile identifier code from the profile identifier if the profile identifier does not include the profile;

means for requesting the profile from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code;

30 means for obtaining profile information from the user;

means for associating a profile identifier code with the obtained profile information;

means for saving the obtained profile information as a profile associated with the profile identifier code;

means for obtaining changes to the profile information from the user;
means for updating the profile associated with the profile identifier code;
means for assigning a new profile identifier code to the updated profile; and
means for saving the updated profile in place of the profile associated with the
5 profile identifier code, the update profile being associated with the new profile
identifier code.

44. A computer program product for identifying a compatible individual in
a specified region using a server located remote from the specified region, the
10 computer program product comprising:

a computer-readable storage medium having computer-readable program code
embodied in said medium, said computer-readable program code comprising:

computer-readable program code which receives a registration request at the
server from a mobile device, the registration request including a profile identifier
15 associated with a user of the mobile device and further including location information
for the mobile device, the location information identifying a location in the specified
region;

computer-readable program code which obtains a profile associated with the
profile identifier;

20 computer-readable program code which determines if a compatible individual
is located within the specified region based on the profile and the location
information; and

computer-readable program code which notifies the user associated with the
mobile device if a compatible individual is located.

25

45. The computer program product of Claim 44 wherein the computer-
readable program code which obtains a profile comprises:

computer-readable program code which determines if the profile identifier
includes the profile;

30 computer-readable program code which obtains a saved profile associated
with a profile identifier code from the profile identifier if the profile identifier does
not include the profile; and

computer-readable program code which requests the profile from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code.

5 46. The computer program product of Claim 45 wherein the server further comprises computer-readable program code which initiates contact between the user of the mobile device and the compatible individual.

10 47. The computer program product of Claim 46 wherein the computer-readable program code which initiates contact further comprises computer-readable program code which schedules a contact time for the user of the mobile device and the compatible individual based on information obtained from at least one of the profile, a profile associated with the compatible individual, schedule information received from the mobile device in the registration request or schedule information
15 received from the mobile device responsive to the notification of a compatible individual.

20 48. The computer program product of Claim 44 wherein the registration request includes search criteria and wherein the computer-readable program code which determines if a compatible individual is located within the specified region comprises computer-readable program code which searches a database containing profiles for a plurality of candidate individuals for a match with the profile associated with the profile identifier based on the search criteria.

25 49. The computer program product of Claim 48 wherein ones of the profiles for the plurality of candidate individuals include a designation of at least one of a local individual for the specified region or a roamer individual for the specified region and wherein the search criteria includes a designation of at least one of local or roamer individual and wherein the computer-readable program code which searches
30 the database further comprises computer-readable program code which searches for profiles containing the designated at least one of local or roamer individual for the specified region.

50. The computer program product of Claim 48 wherein the search criteria includes a designation of duration of stay, the server further comprising at least one of:

- 5 computer-readable program code which places the profile associated with the profile identifier in the search database for the duration of stay; and
- computer-readable program code which periodically searches the search database for a compatible individual for the duration of stay.

51. The computer program product of Claim 50 wherein the search criteria
10 further includes a designation of search timing and wherein the computer-readable program code which periodically searches comprises computer-readable program code which periodically searches the search database for a compatible individual for the duration of stay at times based on the designation of search timing.

15 52. The computer program product of Claim 48 wherein the search criteria includes itinerary information, the itinerary information including at least one association of a residence time with at least one location and wherein the computer-readable program code which periodically searches further comprises computer-readable program code which periodically searches the search database for a
20 compatible individual during respective residence times for a compatible individual located in the associated at least one location for the respective residence time.

53. A computer program product for identifying a compatible individual in a specified region, the computer program product comprising:

- 25 a computer-readable storage medium having computer-readable program code embodied in said medium, said computer-readable program code comprising:

- computer-readable program code which establishes a connection between a wireless terminal and a search database device over a wireless communication network;

- 30 computer-readable program code which determines a location of the wireless terminal using at least one of a global positioning system (GPS) or a land based automated positioning system configured to determine the location of the wireless terminal based on wireless communications between the wireless terminal and the land based automated positioning system;

computer-readable program code which transmits a registration request to the search database over the connection, the registration request including the determined location; and

5 computer-readable program code which receives notification of a compatible individual in a specified region including the determined location from the search database over the connection.

54. A computer program product for identifying a compatible individual in a specified region, the computer program product comprising:

10 a computer-readable storage medium having computer-readable program code embodied in said medium, said computer-readable program code comprising:

computer-readable program code which receives a registration request at a search database from a mobile device, the registration request including a profile identifier associated with a user of the mobile device and further including location
15 information for the mobile device, the location information identifying a location in the specified region;

computer-readable program code which obtains a profile associated with the profile identifier;

20 computer-readable program code which determines if a compatible individual is located within the specified region based on the profile and the location information;

computer-readable program code which notifies the user associated with the mobile device if a compatible individual is located;

25 wherein the computer-readable program code which obtains a profile comprises:

computer-readable program code which determines if the profile identifier includes the profile;

30 computer-readable program code which obtains a saved profile associated with a profile identifier code from the profile identifier if the profile identifier does not include the profile;

computer-readable program code which requests the profile from the user of the mobile device if the profile identifier does not include the profile and if no saved profile is associated with the profile identifier code;

computer-readable program code which obtains profile information from the user;

computer-readable program code which associates a profile identifier code with the obtained profile information;

5 computer-readable program code which saves the obtained profile information as a profile associated with the profile identifier code;

computer-readable program code which obtains changes to the profile information from the user;

10 computer-readable program code which updates the profile associated with the profile identifier code;

computer-readable program code which assigns a new profile identifier code to the updated profile; and

15 computer-readable program code which saves the updated profile in place of the profile associated with the profile identifier code, the update profile being associated with the new profile identifier code.

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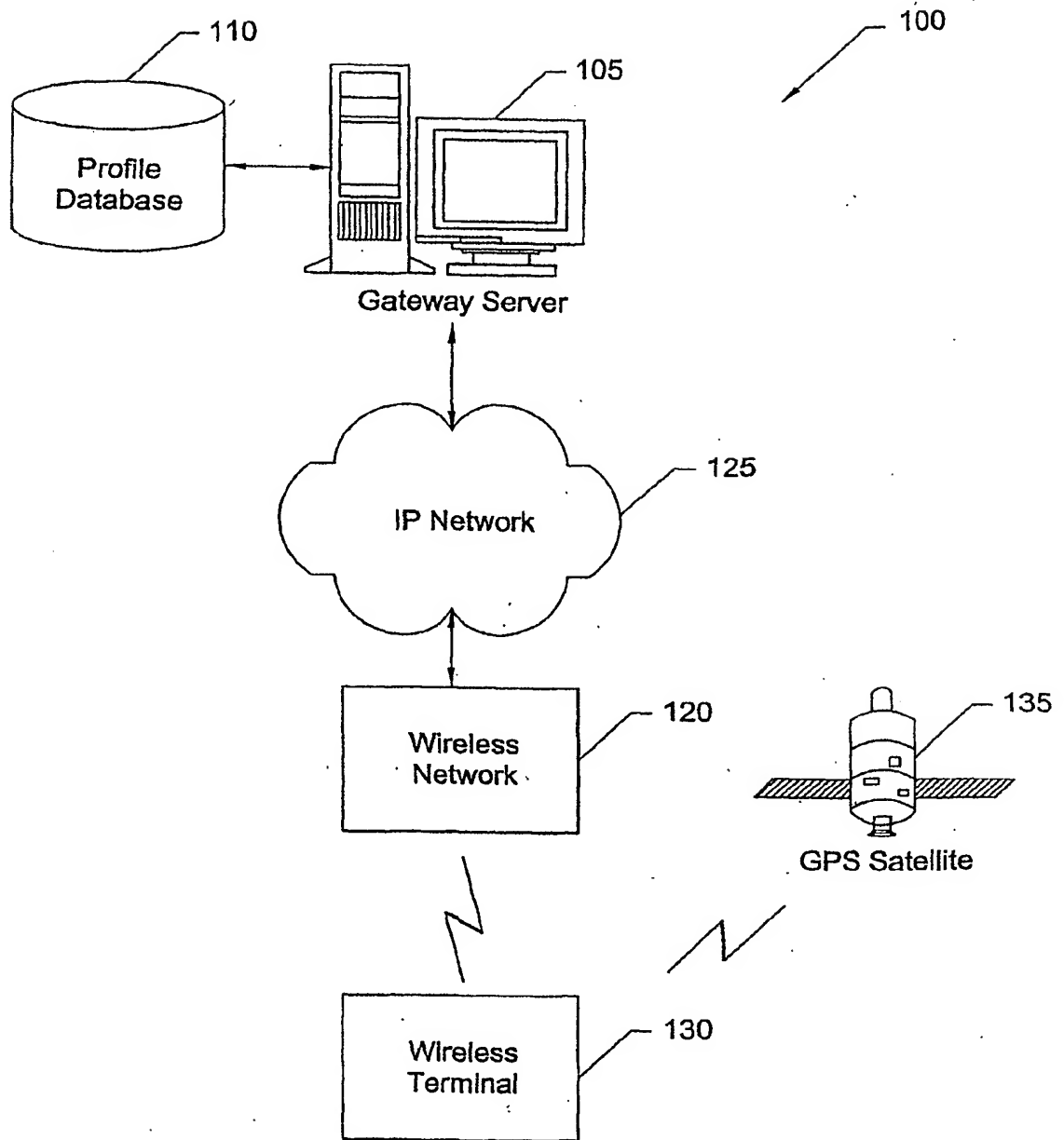
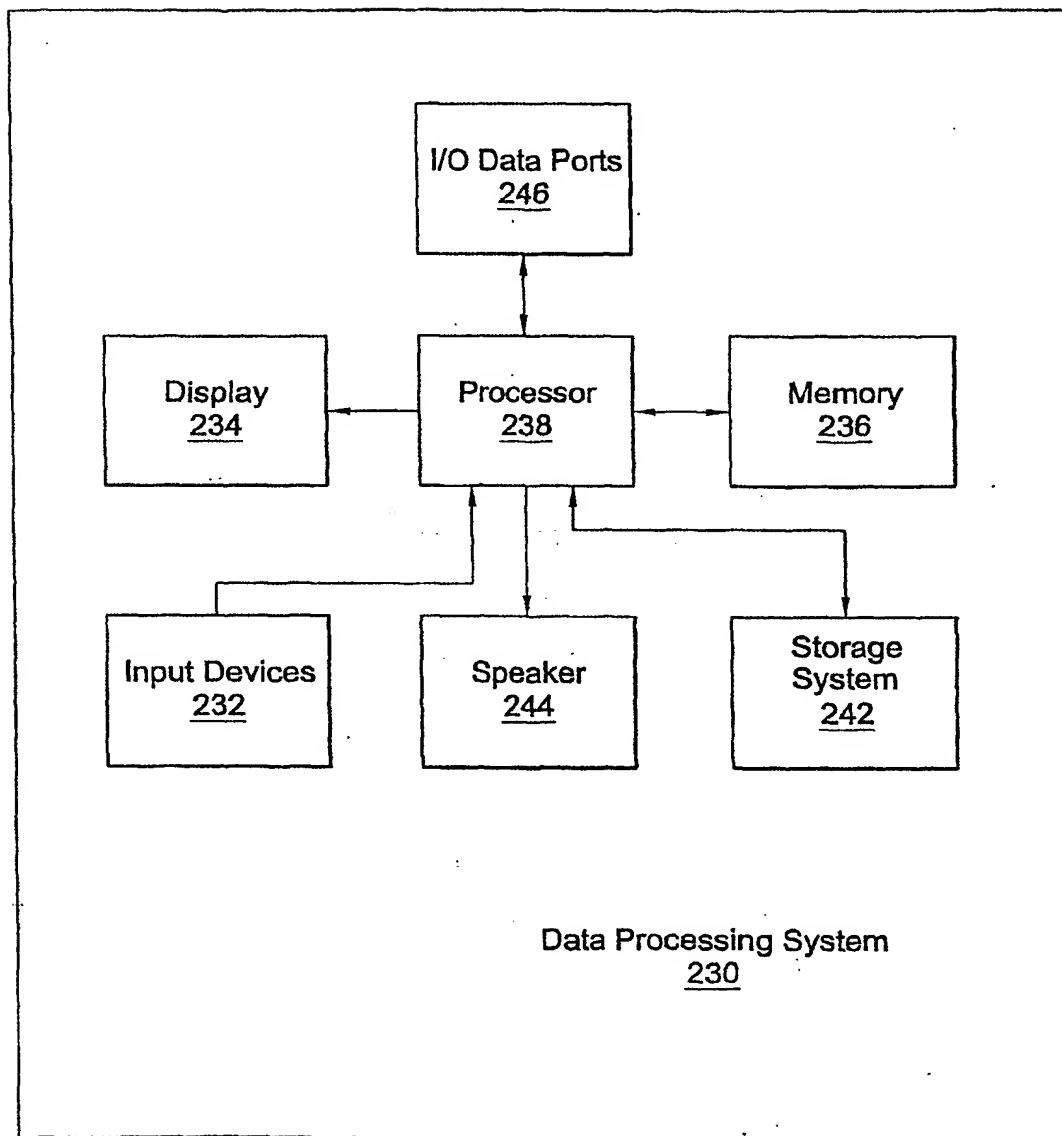
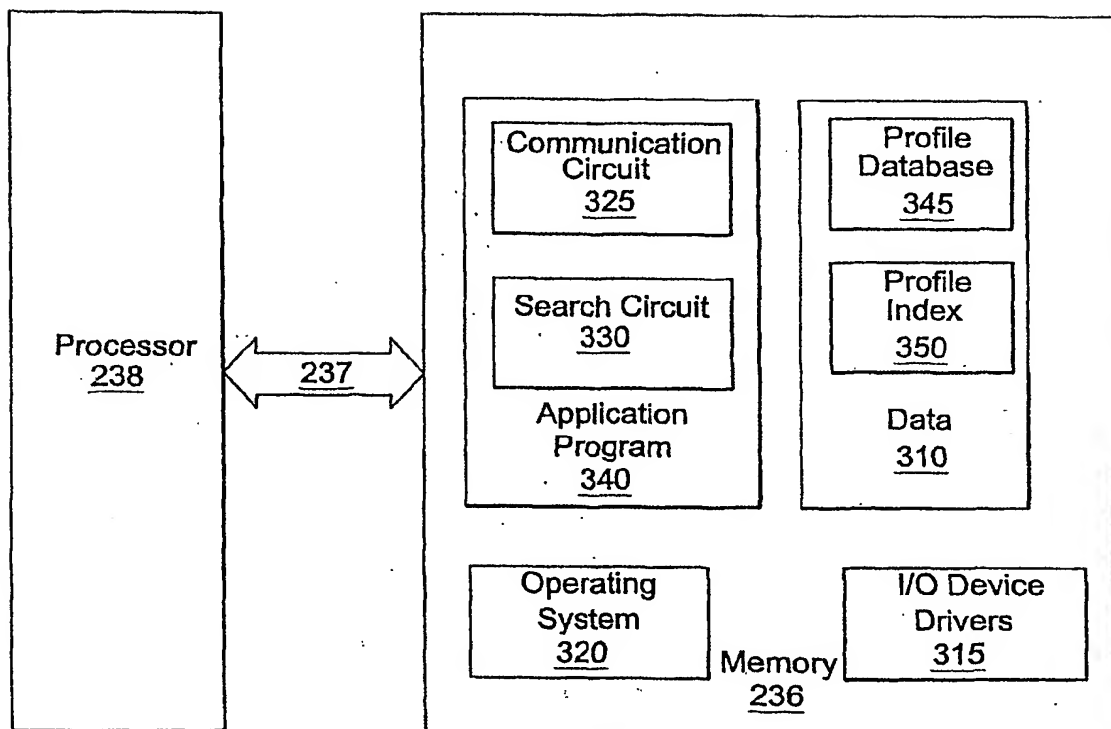


Figure 1.

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Figure 2.

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Figure 3.

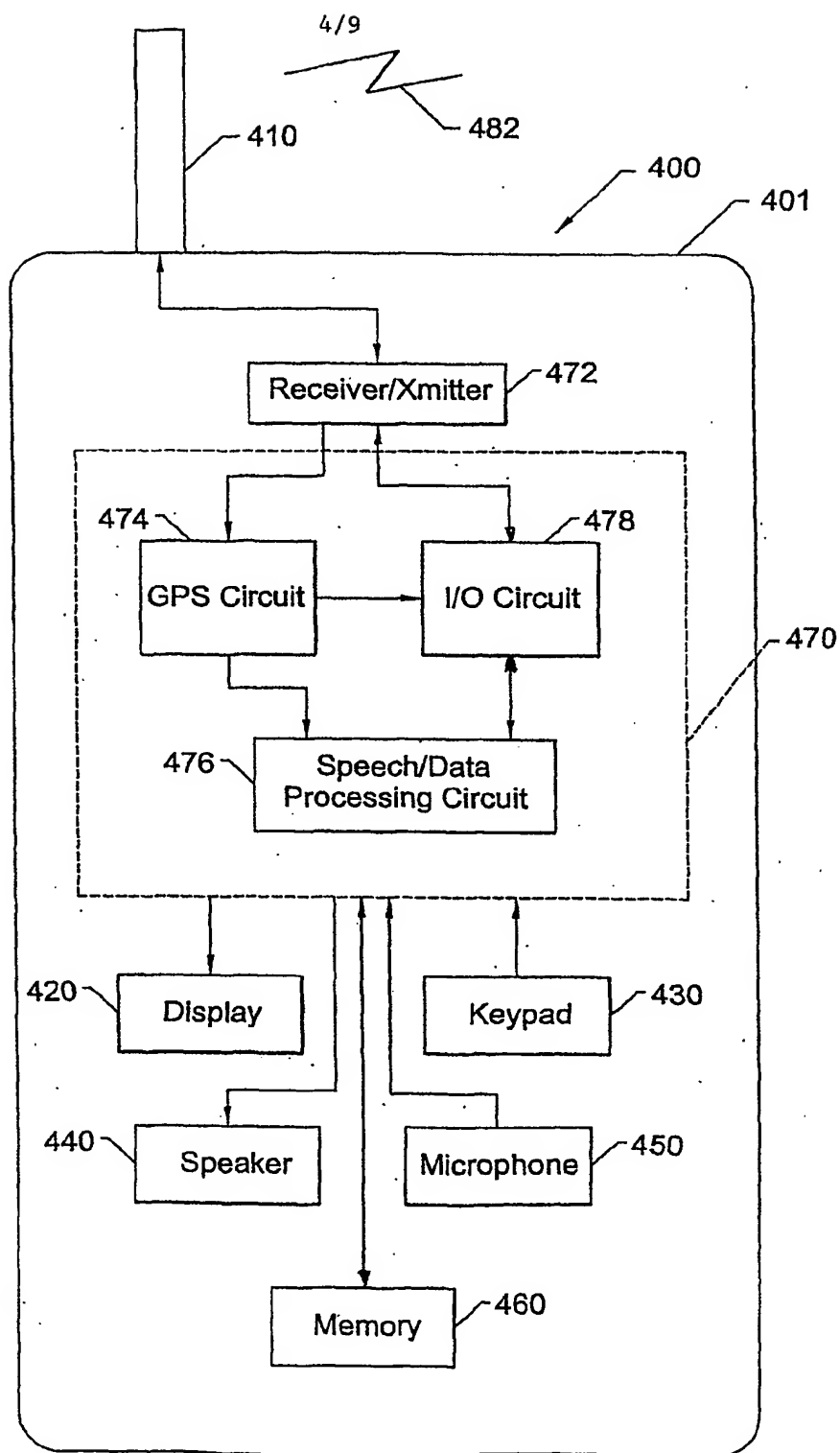


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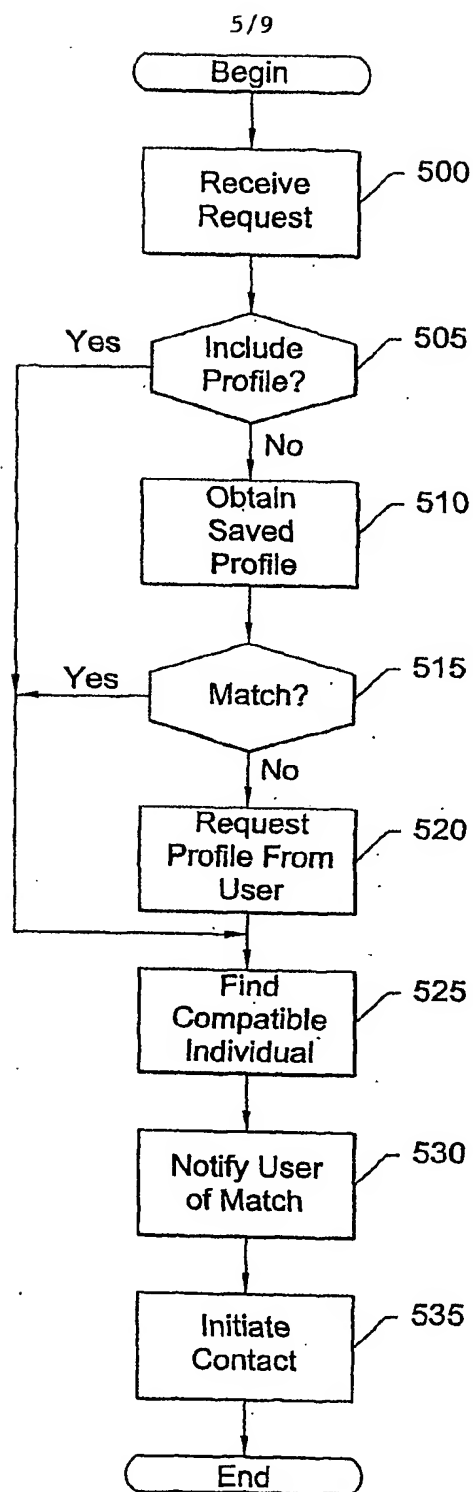
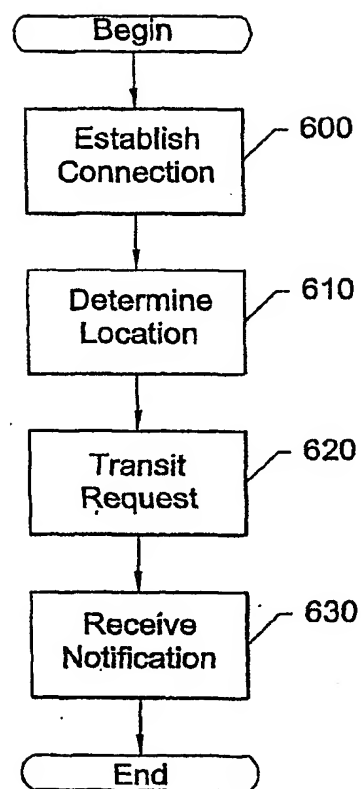
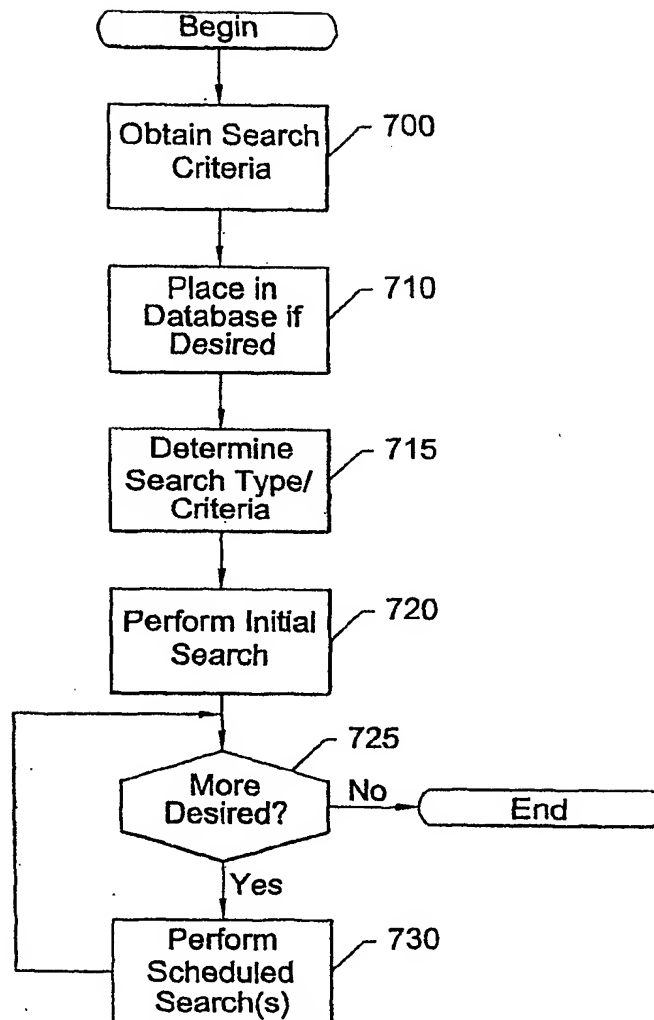


Figure 5.

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Figure 6.

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Figure 7.

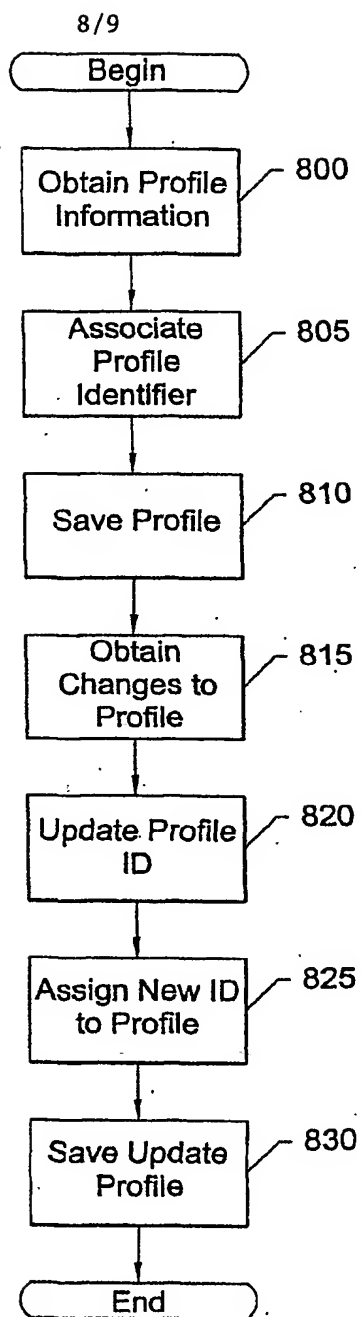


Figure 8.

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